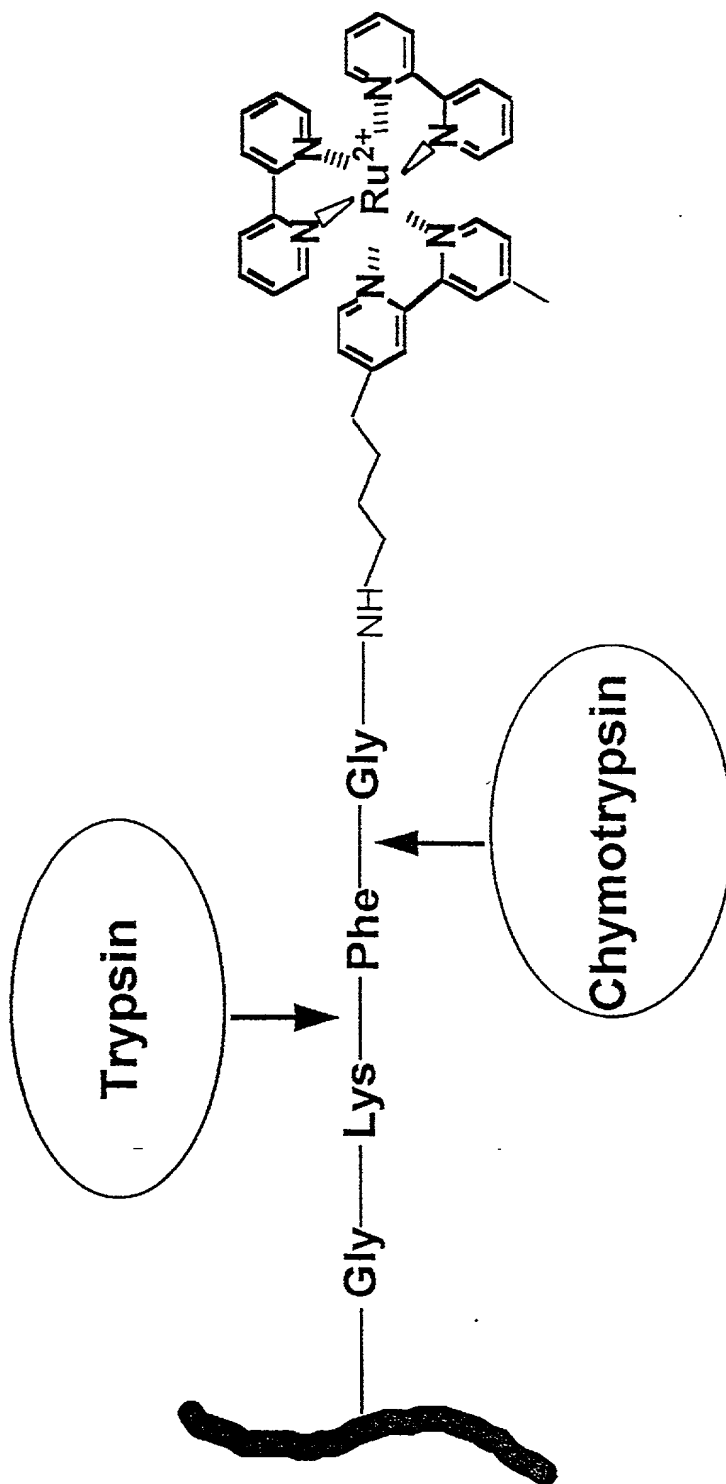
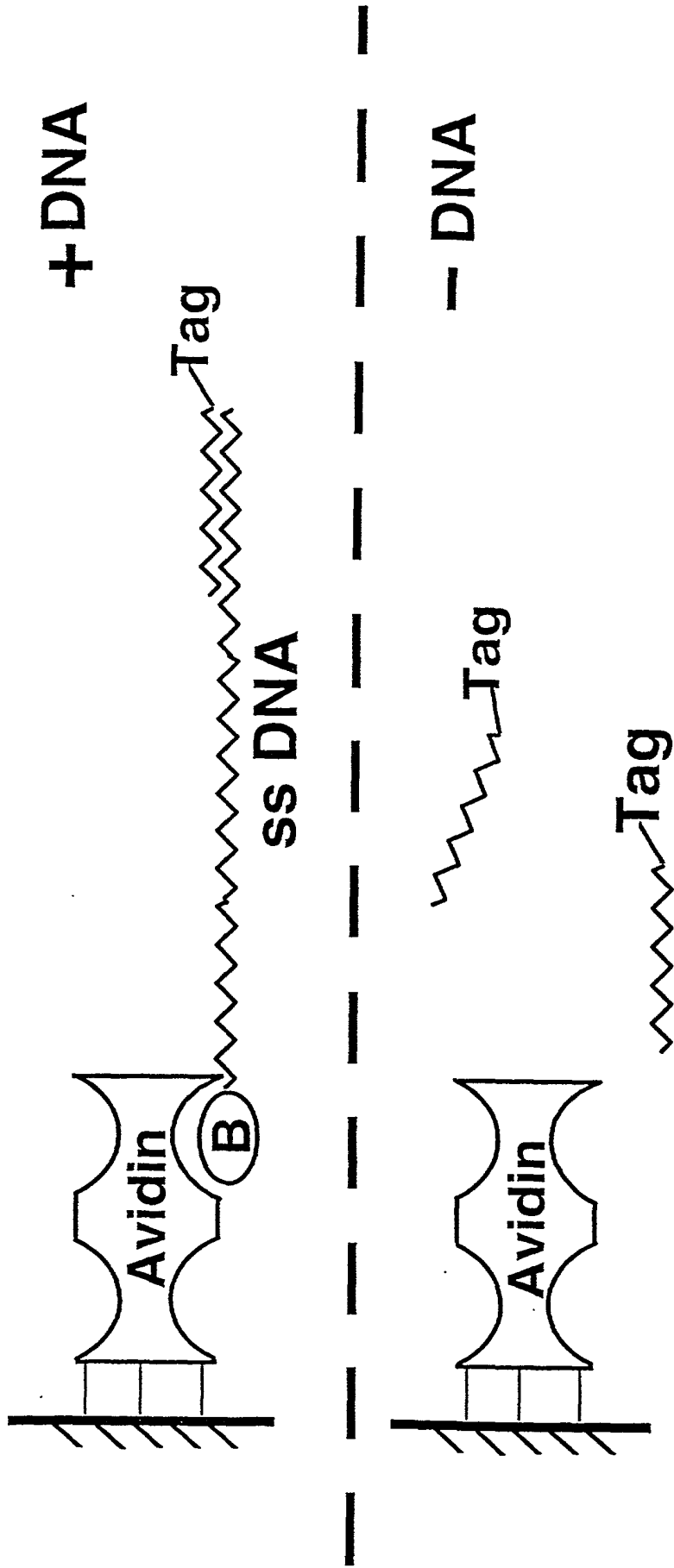




# Ru(bpy)<sub>3</sub><sup>2+</sup>-Liberating Protease Assay



# Avidin-Fibrils as Bead Replacement



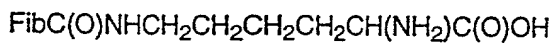
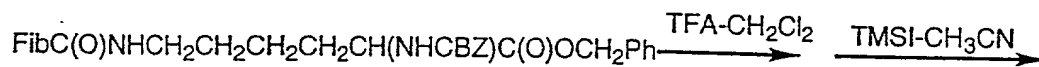
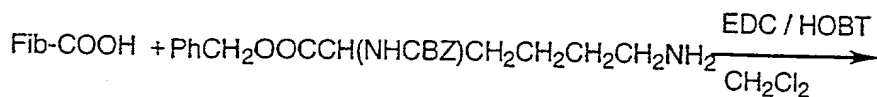
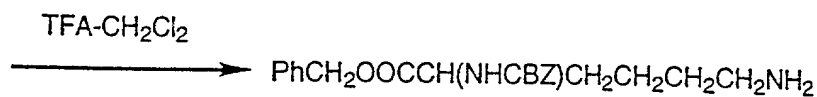
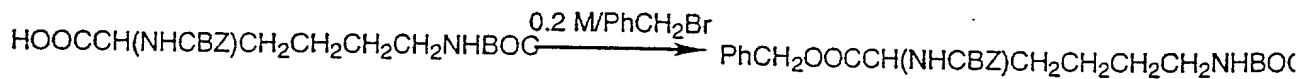
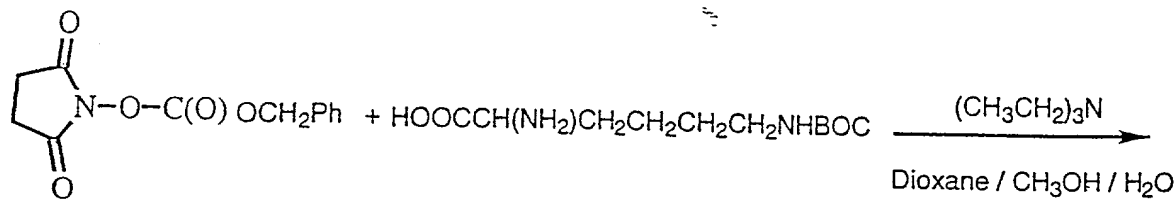


FIG. 5

Fib-C(=O)-NH-(CH2)4-C(=O)-NHCbz + HO(CH2)7CH2-C6H4-C6H4-CH3

↓ DCC / DMAP, CH2Cl2

Fib-C(=O)-NH-(CH2)4-C(=O)-NHCbz-OCH2(CH2)6CH2-C6H4-C6H4-CH3

↓ (C6H4-C6H4)2RuCl2.2H2O

Fib-C(=O)-NH-(CH2)4-C(=O)-NHCbz-OCH2(CH2)6CH2-C6H4-C6H4-CH3 Ru^{2+}(C6H4-C6H4)\_2

↓ TMSI

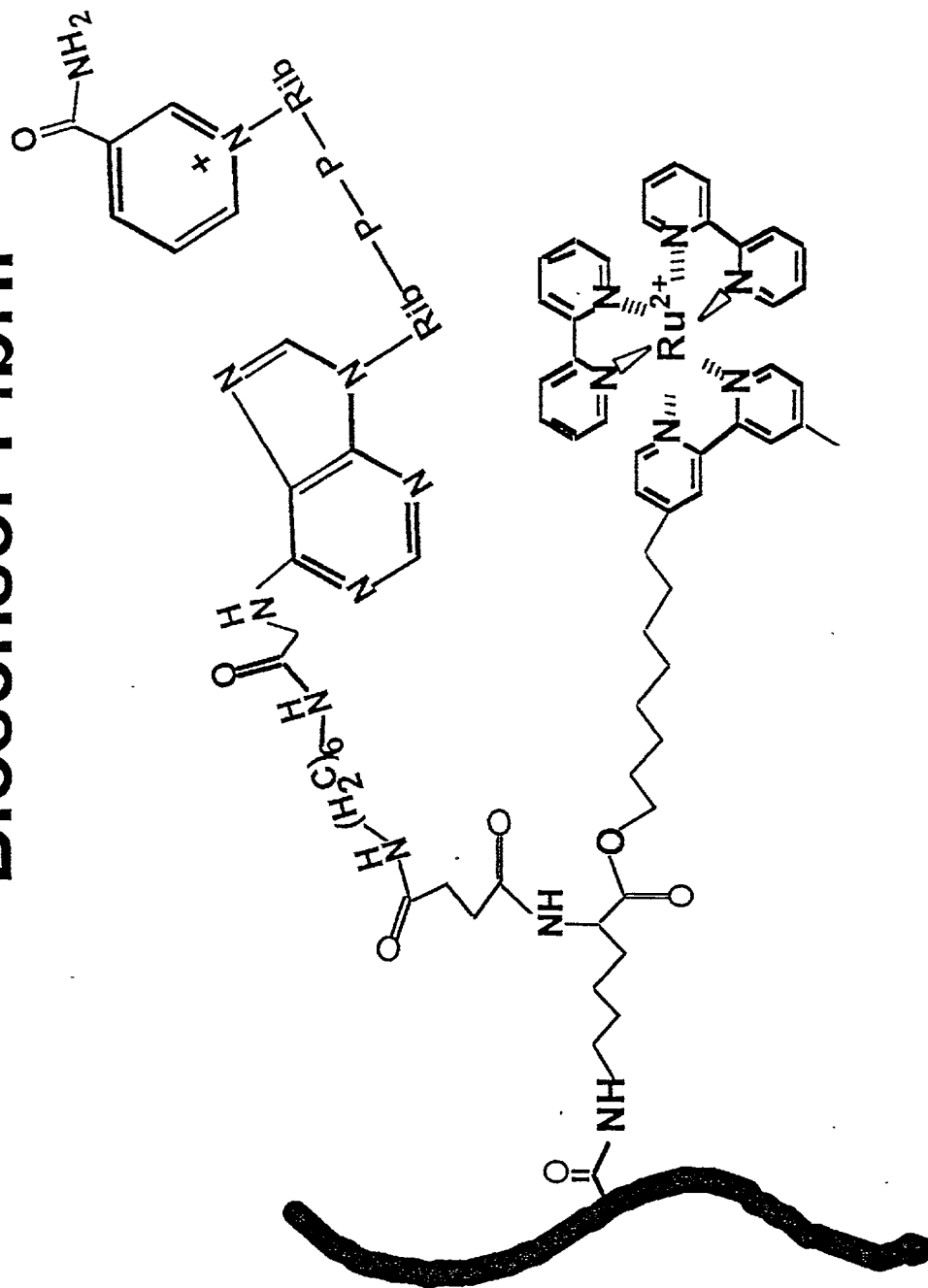
Fib-C(=O)-NH-(CH2)4-C(=O)-NHC(O)CH2CH2COOH-OCH2(CH2)6CH2-C6H4-C6H4-CH3 Ru^{2+}(C6H4-C6H4)\_2

↓ NAD-Analog

Fib-C(=O)-NH-(CH2)4-C(=O)-NHC(O)CH2CH2C(=O)-NH-NAD^+ Ru^{2+}(C6H4-C6H4)\_2

FIG. 6

# Biosensor Fibril



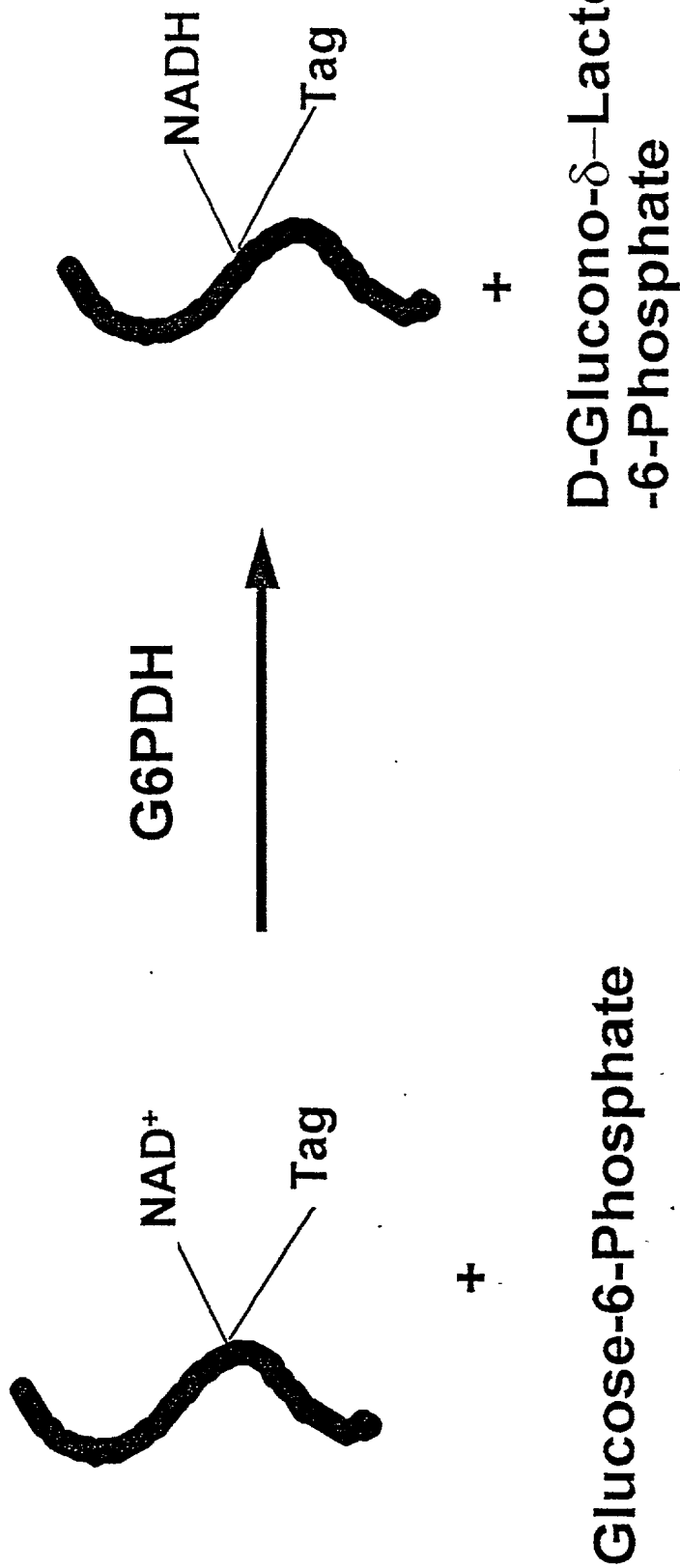
Title: Graphitic Nanotubes in Luminescence Assays  
 Inventors: Massey et al  
 USSN: not yet assigned

IGEN Inc.

FIG. 7

# D-glucose-6-phosphate Dehydrogenase Assay

Title: Graphitic Nanotubes in Luminescence Assays  
 Inventors: Massey et al.  
 USSN: not yet assigned  
 Atty Docket No. 100390-6370

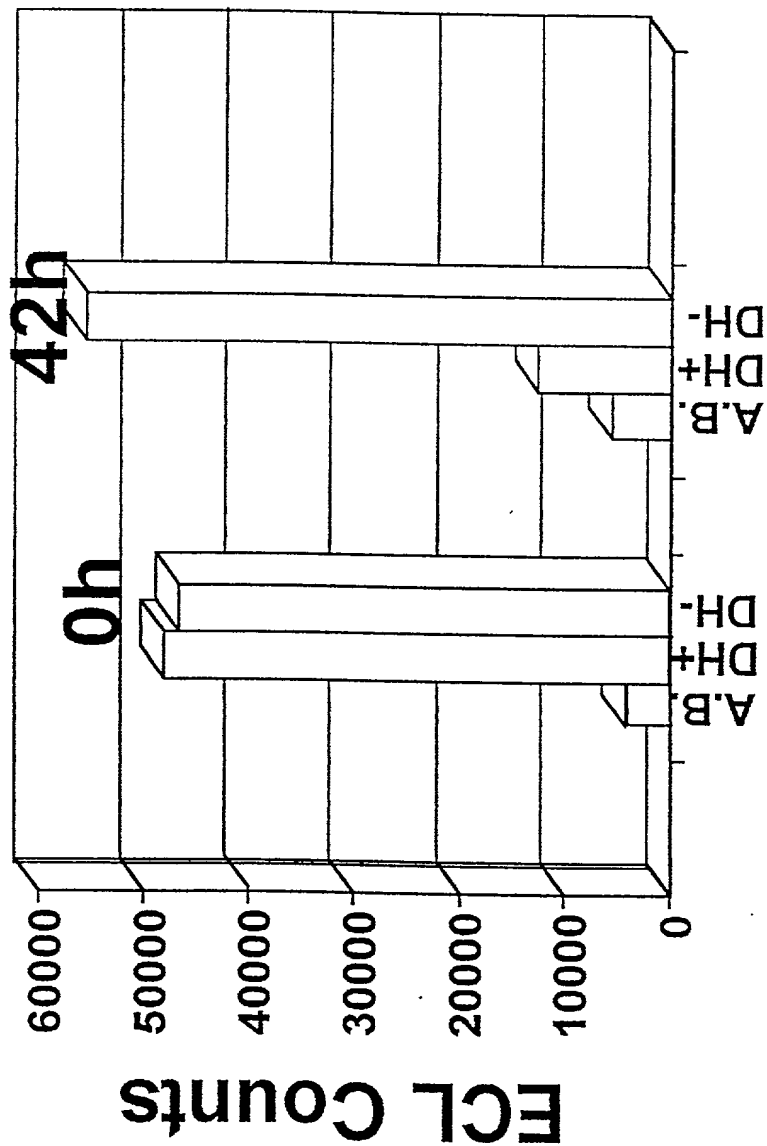


IGEN Inc.

Fig. 8

# ECL Assay of Dehydrogenase on Bifunctional Fibril

Title: Graphitic Nanotubes in Luminescence Assays  
Inventors: Massey et al.  
USSN: not yet assigned  
Atty. Docket No. 100390-6370



IGEN Inc.

FIG. 9

## NAD-ADH-TAG Conjuate

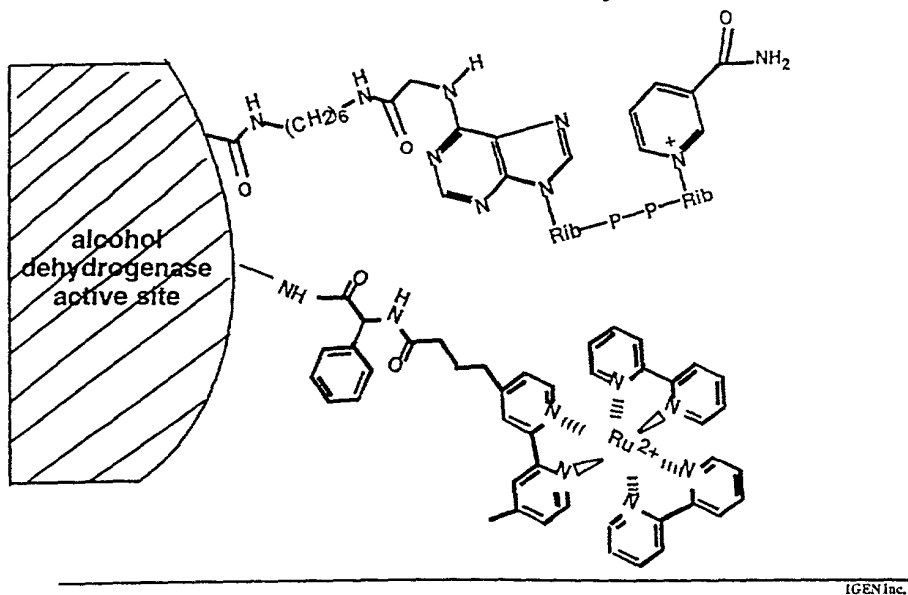
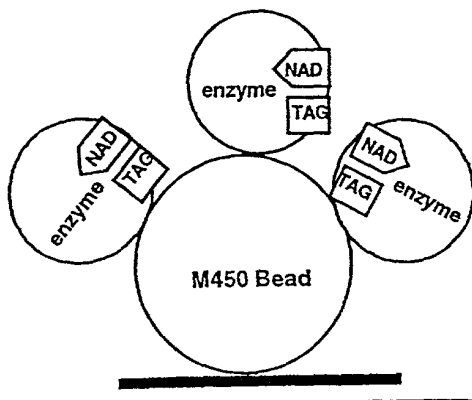


FIG. 10

## Immobilization of NAD-ADH-Tag

Immobilization to Bead



Immobilization to Fibril

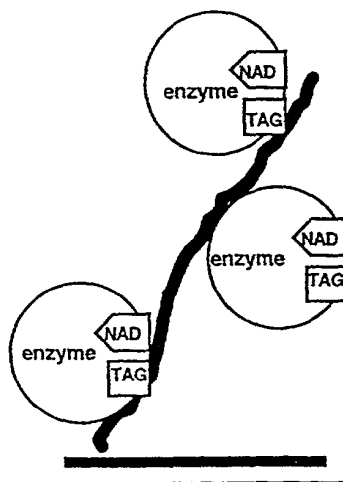


FIG. 11

bead result

fibril result

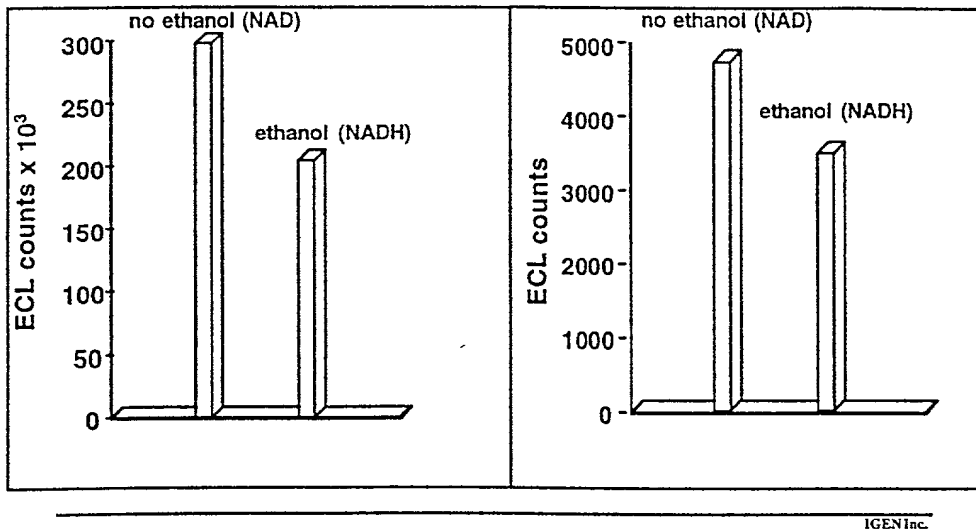


FIG. 12

# NSB of Ru(Bipy)3 to Modified CN

ECL assay of Ru(Bipy)3 remaining in supernatant vs [CN]  
 Rel. ECL signal of Ru(Bipy)3 in Supernatant

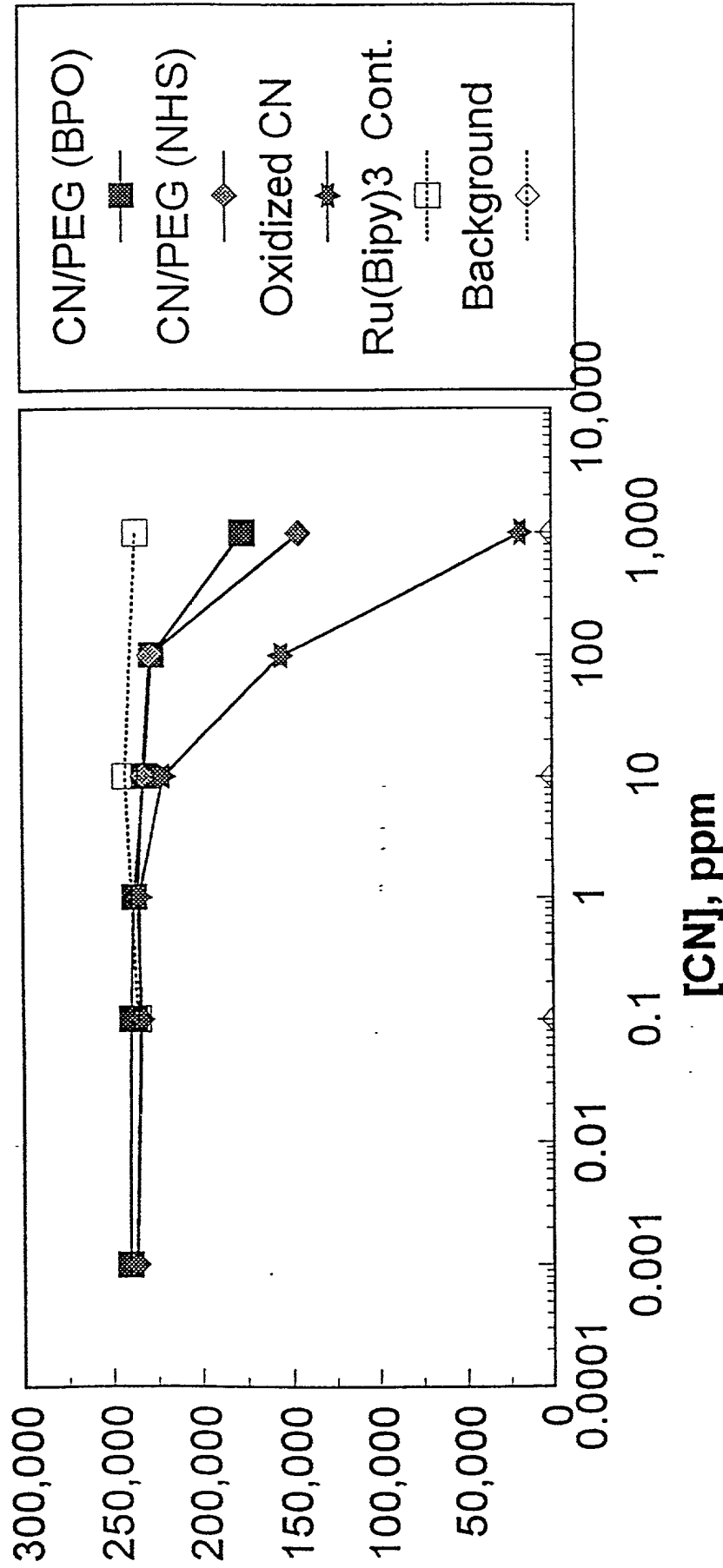


FIG. 13